

Hafner Publ. Co., N.Y.: 197), in describing eupelmid eggs, stated, "There is little variation in form among the eggs of representatives of this family. The main body of the egg is ellipsoidal and bears a stalk of varying length at the anterior end."

Within the Chalcidoidea, tanaostigmatids, encyrtids and eupelmids form a discrete group which is considered monophyletic. However, the phylogenetic relationships between these three taxa are not clear. Tanaostigmatids have been classified as a family, as a subfamily of the Encyrtidae, and as a subfamily of the Eupelmidae. The presence of encyrtiform eggs in the tanaostigmatids is considered a derived character shared with the encyrtids. The importance of this synapomorphic character taken alone will not be addressed in this note. Rather it is reported because it is of value to future analyses of phylogenetic relationships among these three groups.

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NOTE

Abdominal Blotches of *Frankliniella trehernei* and Differentiation of *F. occidentalis* and *F. bruneri* (Thysanoptera: Thripidae)

The diagnostic significance of the grayish brown abdominal blotches in pale species of *Frankliniella* was not fully recognized in early taxonomic studies of some American species of the genus. Clear pale adult specimens without such blotches on abdominal tergites were usually considered teneral, and the presence or absence of such blotches tended to be ignored in the diagnoses. Although most of the pale species bear such blotches, few are completely pale even at maturity. Thus the presence or absence of abdominal blotches have diagnostic value. A small group of such species without abdominal blotches in the *intonsa* series of the *intonsa* group is differentiated from the rest of the series and is called the *runneri* complex. On the other hand, a few widely distributed pale species with abdominal blotches in the cool temperate regions are often fully or partly without them in the warmer subtropic regions. This makes the situations a little complicated. A good example is the pale form of *F. occidentalis* (Pergande). The particular case to be discussed here is of *F. trehernei* Morgan which was synonymized earlier with *occidentalis* by Bryan and Smith (1956. Univ. Calif. Publ. Entomol. 10: 388), based on diagnostic characters not including abdominal blotches.

The type series of *F. trehernei* (USNM) collected at Naramata and its vicinity in southern British Columbia, Canada, consists of 12 specimens which were all excessively treated with KOH, but the abdominal blotches are still feebly to clearly visible on four of them. This indication clearly confirmed the synonymy of *trehernei* with *occidentalis* which is always with abdominal blotches in the pale form

of the species in the northern regions. Morgan (1925. Can. Entomol. 57: 144), who received the mounted specimens from R. C. Treherne and had not seen the untreated specimens, however, described the body as "very pale grayish yellow" and did not mention the abdominal blotches. Furthermore, he compared this species with *F. gossypiana* Hood (= *Euthrips gossypii* Morgan) which is also a pale species without abdominal blotches. Moulton (1948. Rev. Entomol., Rio de J. 19: 66, 71, 96, 98), in his revision of the genus, then interpreted *trehernei* as a teneral stage of *F. californica* Moulton (a synonymous name of the dark form of *occidentalis*), and, erroneously assuming it to be a clear pale species without blotches, speculated that *trehernei* was probably conspecific with *F. pseudotritici* Priesner from southern Mexico. However, *pseudotritici* as well as *F. inornata* Moulton was both recently discovered to be synonymous with *F. bruneri* Watson (Sakimura, 1981. Fla. Entomol. 64: 487), which is a pale species without blotches and is not related to *occidentalis*. Many specimens of *trehernei*, *pseudotritici*, and *inornata* in both the USNM and California Academy of Sciences collections determined by Moulton were found to be a mixture of both *occidentalis* and *bruneri*. It is interesting to note here that the pale form of *occidentalis* in southern Texas and northeastern Mexico quite often lacks abdominal blotches even at maturity, and is nearly as common as *bruneri* there. Consequently, both species look very much similar in Texas and Mexico, and can be segregated only by a few minor diagnostic characters that are often hard to correctly visualize. They are: head dimension about 1.3× as wide as long in *occidentalis* but 1.4× in *bruneri*, occipital striae narrowly spaced in the former but broadly spaced in the latter, and antennal VII decidedly longer than wide in the former, but about as long as wide in the latter. The glandular areas of male sternites of both *occidentalis* and *bruneri* are similarly small transversely rod-shaped, and do not serve for separating the species. The earlier description of the glandular areas for *bruneri* (Sakimura, 1981) is in error and herewith corrected.

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NOTE

Initial Host-Plant Records for Five Species of Fruit Flies from Southern California (Diptera: Tephritidae)

Newly discovered host plants in the family Asteraceae initially are reported for five species of nonfrugivorous Tephritidae. The plant nomenclature used follows Munz (1974. A Flora of Southern California. Univ. Calif. Press, Berkeley, Los Angeles, London. 1086 pp); the insect nomenclature, Foote and Blanc (1963. Bull. Calif. Insect Surv. 7, 115 pp.). Rearing records for the flies and their host plants are listed alphabetically.

Euaestoides arnaudi Foote, 1 ♂ reared from a quantity of flower heads of